

CLAIMS:

1. A method for providing respective voltage waveforms for driving respective portions of a bi-stable display, the method comprising:

accessing data defining the respective voltage waveforms; and

generating the respective voltage waveforms (700, 720, 740, 760; 800, 820, 840, 860; 900, 920, 940, 960; 1000, 1020, 1040, 1060) for driving the respective portions of the bi-stable display (310) according to the accessed data so that each of the respective voltage waveforms is used for driving the respective portion of the bi-stable display from a respective different initial optical state to a common final optical state, and each of the respective voltage waveforms includes at least a first re-addressing pulse (RP, RP1, RP2, RP3).

2. The method of claim 1, wherein:

the generating comprises generating the respective voltage waveforms so that each of the respective voltage waveforms includes the at least a first re-addressing pulse (RP, RP1, RP2, RP3) for providing each of the respective portions of the bi-stable display with a substantially uniform brightness decay versus unpowered holding time characteristic (1100, 1110, 1120, 1130).

3. The method of claim 1, wherein:

the generating comprises generating the respective voltage waveforms so that each of the respective voltage waveforms includes the at least a first re-addressing pulse (RP, RP1, RP2, RP3) with substantially the same energy in each of the respective voltage waveforms.

4. The method of claim 1, wherein:

the generating comprises generating the respective voltage waveforms so that each of the respective voltage waveforms includes the at least a first re-addressing pulse (RP, RP1, RP2, RP3) with substantially the same pulse shape in each of the respective voltage waveforms.

5. The method of claim 4, wherein:

the pulse shape which is substantially the same in each of the respective voltage waveforms comprises at least a first pulse having a first polarity which is the same in each of the respective voltage waveforms.

6. The method of claim 1, wherein:

the generating comprises generating the respective voltage waveforms so that each of the respective voltage waveforms includes a plurality of re-addressing pulses (RP1, RP2, RP3) with substantially the same pulse shape in each of the respective voltage waveforms.

7. The method of claim 6, wherein:

the pulse shape which is substantially the same in each of the respective voltage waveforms comprises the at least a first re-addressing pulse (RP1), which has a first polarity which is the same in each of the respective voltage waveforms, followed by a second re-addressing pulse (RP2), which has a second polarity that is opposite the first polarity, and which is the same in each of the respective voltage waveforms.

8. The method of claim 6, wherein:

the pulse shape which is substantially the same in each of the respective voltage waveforms comprises the at least a first re-addressing pulse (RP1), which has a first polarity which is the same in each of the respective voltage waveforms, followed by a second re-addressing pulse (RP2), which has a second polarity that is opposite the first polarity, and which is the same in each of the respective voltage waveforms, followed by a third re-addressing pulse (RP3), which has the first polarity.

9. The method of claim 1, wherein:

the generating the respective voltage waveforms comprises generating the respective voltage waveforms so that each of the respective voltage waveforms includes a driving pulse (D) preceding the at least a first re-addressing pulse (RP, RP1, RP2, RP3) for driving the respective portion of the bi-stable display from the respective different initial optical state substantially to the common final optical state.

10. The method of claim 1, wherein:

the bi-stable display (310) comprises an electrophoretic display.

11. A program storage device tangibly embodying a program of instructions executable by a machine to perform a method for providing respective voltage waveforms for driving respective portions of a bi-stable display, the method comprising:

accessing data defining the respective voltage waveforms; and

generating the respective voltage waveforms (700, 720, 740, 760; 800, 820, 840, 860; 900, 920, 940, 960; 1000, 1020, 1040, 1060) for driving the respective portions of the bi-stable display (310) according to the accessed data so that each of the respective voltage waveforms is used for driving the respective portion of the bi-stable display from a respective different initial optical state to a common final optical state, and each of the respective voltage waveforms includes at least a first re-addressing pulse (RP, RP1, RP2, RP3).

12. The program storage device of claim 11, wherein:

the generating comprises generating the respective voltage waveforms so that each of the respective voltage waveforms includes the at least a first re-addressing pulse (RP, RP1, RP2, RP3) for providing each of the respective portions of the bi-stable display with a substantially uniform brightness decay versus unpowered holding time characteristic (1100, 1110, 1120, 1130).

13. The program storage device of claim 11, wherein:

the generating comprises generating the respective voltage waveforms so that each of the respective voltage waveforms includes the at least a first re-addressing pulse (RP, RP1, RP2, RP3) with substantially the same energy in each of the respective voltage waveforms.

14. The program storage device of claim 11, wherein:

the generating comprises generating the respective voltage waveforms so that each of the respective voltage waveforms includes a plurality of re-addressing pulses (RP1, RP2, RP3) with substantially the same pulse shape in each of the respective voltage waveforms;

and

the pulse shape which is substantially the same in each of the respective voltage waveforms comprises the at least a first re-addressing pulse (RP1), which has a first polarity which is the same in each of the respective voltage waveforms, followed by a second re-addressing pulse (RP2), which has a second polarity that is opposite the first polarity, and which is the same in each of the respective voltage waveforms.

15. The program storage device of claim 11, wherein:
the bi-stable display (310) comprises an electrophoretic display.

16. An electronic reading device, comprising:
a bi-stable display (310); and
a control (100) for providing respective voltage waveforms for driving respective portions of a bi-stable display to a common final optical state by: (a) accessing data defining the respective voltage waveforms, and (b) generating the respective voltage waveforms (700, 720, 740, 760; 800, 820, 840, 860; 900, 920, 940, 960; 1000, 1020, 1040, 1060) for driving the respective portions of the bi-stable display (310) according to the accessed data so that each of the respective voltage waveforms is used for driving the respective portion of the bi-stable display from a respective different initial optical state to a common final optical state, and each of the respective voltage waveforms includes at least a first re-addressing pulse (RP, RP1, RP2, RP3).

17. The electronic reading device of claim 16, wherein:
the generating comprises generating the respective voltage waveforms so that each of the respective voltage waveforms includes the at least a first re-addressing pulse (RP, RP1, RP2, RP3) for providing each of the respective portions of the bi-stable display with a substantially uniform brightness decay versus unpowered holding time characteristic (1100, 1110, 1120, 1130).

18. The electronic reading device of claim 16, wherein:
the generating comprises generating the respective voltage waveforms so that each of the respective voltage waveforms includes the at least a first re-addressing pulse with

substantially the same energy in each of the respective voltage waveforms.

19. The electronic reading device of claim 16, wherein:

the generating comprises generating the respective voltage waveforms so that each of the respective voltage waveforms includes a plurality of re-addressing pulses (RP1, RP2, RP3) with substantially the same pulse shape in each of the respective voltage waveforms; and

the pulse shape which is substantially the same in each of the respective voltage waveforms comprises the at least a first re-addressing pulse (RP1), which has a first polarity which is the same in each of the respective voltage waveforms, followed by a second re-addressing pulse (RP2), which has a second polarity that is opposite the first polarity and which is the same in each of the respective voltage waveforms.

20. The electronic reading device of claim 16, wherein:

the bi-stable display (310) comprises an electrophoretic display.